

Mitigation Strategy Concept

[The mitigation strategy shall include] a description of State goals to guide the selection of activities to mitigate and reduce potential losses.

Hazard identification presented later in this document along with the risk analysis within each chapter, together identify the likelihood of a natural hazard having severe enough consequences to warrant mitigation. The UPDMPC has developed goals, objectives, and action items specific to each hazard, when united they provide a strategy to lessen the vulnerability of each specified hazard. Strategies developed for each hazard are not all inclusive and the state reserves the right to modify strategies as it sees fit to address mitigation needs as they arise. Future occurrences, new technology, or an unforeseen event could result in a modification to strategies outlined in this plan.

Even though a potential project may not be listed in this plan as a specific mitigation action, the State will still aid in completing the project, as if it were a project listed in this state mitigation plan. State support will be applied to any mitigation action deemed cost effective and environmentally sound, which can be classified under any of the six FEMA approved mitigation categories:

Prevention

Keeps problems from getting started or getting worse. The use of known hazards areas, like floodplains for example, can be limited through planning, land acquisition, or regulation.

Property Protection

Measures are those actions that go directly to permanently getting people, property, and businesses out of unsafe areas where, in terms of wise disaster planning they shouldn't have been in the first place.

Natural Resource Protection

Projects pertaining to natural resource protection preserve or restore natural areas or their natural functions.

Emergency Services

Measures are taken during a disaster to minimize its impacts. These measures are the responsibility of city and county emergency managers, operators of major and critical facilities, and local emergency service organizations.

Structural Projects

Structural projects are usually designed by engineers are designed to reduce or redirect the impact of natural disasters away from at-risk population areas.

Public Information

Public information advises property owners, potential property owners, and others of hazards and ways to protect people and property from them.

Additional information and suggested projects under these classifications can be found in the State of Utah Mitigation Menu in Appendix B

In this plan the following definitions apply, with regards to the layout of state mitigation strategies:

Mitigation Strategies: A method by which an aspect of a specific hazard could be mitigated. A strategy consists of at least one goal per hazard, at least one objective per goal, and at least one action items per objective. A strategy is not complete without all three.

Goal: A statement of an ideal condition that addresses a specific aspect of a hazard to reduce the severity of its impact. Goals are not fully attainable.

Objective: A statement of a step that could reasonably be taken toward achieving a goal. Objectives may be difficult to reach, but are attainable within the planning timeframe.

Potential Projects: A specific activity that could be undertaken to provide one step toward an objective. Many of the specific action items in this plan enforce mitigation actions generated at the local level.

Per DMA 2000 requirements, State Hazard Mitigation, plans must address critical facilities, especially those owned by the State. Specific mitigation strategies exist through out his plan for state owned facilities; this is particularly true for those critical facilities found to lie within high hazard boundaries.

Strategies reflect what Utah would like to mitigate. These strategies do not take into account the biggest limiting factor in successfully completing mitigation, funding! Thus, implementation of the mitigation strategies listed in this plan or any of the locally adopted PDM plans is contingent upon the sponsor receiving financial support.

The majority of mitigation projects in Utah are locally determined and prioritized based on community priorities. Part of the states technical assistance efforts have been directed to assisting communities in identifying cost effective mitigation measures that will yield benefits toward reducing their risk to hazards. A complete list of locally generated mitigation strategies related to severe weather can be found in the local mitigation strategies section of this mitigation plan. Interdisciplinary multi-jurisdictional working groups, coordinated at the county level, generated these mitigation strategies, which were incorporation into the regional Pre-Disaster Mitigation plans completed by the seven Associations of Government.

Section Five of this mitigation plan contains a comprehensive table of locally generated mitigation projects. The projects in the matrix are from the seven regional mitigation plans and represent a state wide list of mitigation projects.

Goals

Short Term Goals

These goals form the basis for the development of the PDM Plan and are shown from highest priority, at the top of the list, to those of lesser importance nearer the bottom.

- Protection of life before, during, and after the occurrence of a disaster.

- Preventing loss of life and reducing the impact of damage where problems cannot be eliminated.
- Protection of emergency response capabilities (critical infrastructure)
- Communication and warning systems
- Emergency medical services and medical facilities
- Mobile resources
- Critical facilities
- Government continuity
- Protection of developed property, homes and businesses, industry, education opportunities and the cultural fabric of a community, by combining hazard loss reduction with the community's environmental, social and economic needs.
- Protection of natural resources and the environment, when considering mitigation measures.
- Promoting public awareness through education of community hazards and mitigation measures.
- Preserving and/or restoring natural features that provide mitigation such as floodplains.

Long Term Goals

- Eliminate or reduce the long-term risk to human life and property from identified natural and technologic hazards.
- Aid both the private and public sectors in understanding the risks they may be exposed to and finding mitigation strategies to reduce those risks.
- Avoid risk of exposure to identified hazards.
- Minimize the impacts of those risks when they can not be avoided
- Mitigate the impacts of damage as a result of identified hazards.
- Accomplish mitigation strategies in such way that negative environmental impacts are minimized.
- Provide a basis for funding of projects outlined as hazard mitigation strategies.
- Establish a regional platform to enable the community to take advantage of shared goals, resources, and the availability of outside resources. If an earthquake occurs outside of the county seat it will still affect the county seat. This is similar to many natural hazards.
- Establish a framework and database for the county seat to use to apply for aid.

State Plan Mitigation Strategies

State plans shall include] an identification, evaluation, and prioritization of cost-effective, environmentally sound, and technically feasible mitigation actions and activities the State is considering and an explanation of how each activity contributes to the overall mitigation strategy. This section should be linked to local plans, where specific local actions and projects are identified

Dam Safety ▼

The Division of Water Rights Dam Safety Section is in charge of maintaining dam safety within the state of Utah. Dam Safety is inherently, by nature and definition, centered on mitigation. Thus the single most important dam safety mitigation strategy would be continued funding at an

elevated level. Elevated funding would allow the state to bring more dams up to current standards in a shorter amount of time.

The majority of mitigation projects in Utah are locally determined and prioritized based on community priorities. Part of the states technical assistance efforts have been directed to assisting communities in identifying cost effective mitigation measures that will yield benefits toward reducing their risk to hazards. A complete list of locally generated mitigation strategies pertaining to dam safety can be found in the local mitigation strategies section of this mitigation plan. Interdisciplinary multi-jurisdictional working groups, coordinated at the county level, generated these mitigation strategies, which were incorporation into the regional Pre-Disaster Mitigation plans completed by the seven Associations of Government.

#1 Priority Goal: Eliminate unsafe dams in the State of Utah.

A. Objective: Bring existing dams up to current standards.

Possible projects:

1. Complete the Dam Safety projects prioritized in the Dam Rehabilitation Priority Listing done by Dam Safety Section. The priority listing is available in Appendix J.
2. Complete Piute, Sevier Bridge, Big Sand Wash, Red Butte, Tony Grove, Mill Meadows, Wide Hollow, DMAD, and Gunnison Bend Dam safety improvement projects.

Responsible agencies:

Utah Division of Water Rights Dam Safety Section

Private individuals, businesses, and water districts whom own dams.

Possible funding:

HMGP, PDM, State Dam Safety

#2 Priority Goal: Bring advances in the scientific and engineering fields into dam safety planning.

A. Objective: Update dam Emergency Action Plans EAP.

Possible projects:

1. Updated all dated EAP plans off of a prioritized risk table.
2. Digitized dam failure inundation maps for use in Geographic Information Systems.

Responsible agencies:

Utah Division of Water Rights Dam Safety Section

Division of Emergency Services and Homeland Security

Private individuals and companies who own dams.

Possible funding:

HMGP, PDM, State Dam Safety

B. Objective: Study dam failure vulnerability.

Possible projects:

3. Utilized digitized dam failure inundation map to calculate locational vulnerability.
4. Estimate losses for inundated areas to validate dam upgrades.

Responsible agencies:

Utah Division of Water Rights Dam Safety Section
Division of Emergency Services and Homeland Security
Automated Geographic Reference Center
Private individuals, businesses, and water districts whom own dams.

Possible funding:

HMGP, PDM, State Dam Safety

Drought Mitigation Strategies ✓

The impacts of drought can be partially mitigated through cooperative partnerships between state and federal agencies, Tribes, public land users, and the Governor's Office. The unique composition of land ownership in Utah means drought mitigation must be completed through multi-agency efforts utilizing multi-disciplinary teams. Mitigation strategies listed below support the statewide drought mitigation plan, Utah Partners for Conservation and Development Drought Assessment and Mitigation State of the State Report (Appendix H), Land Use Plans from land management agencies, the State Drought Plan Appendix G. The bottom line is, it takes teamwork, science, and above all time, patience, and communication to mitigate the economic, social, and environmental impacts of drought.

The majority of mitigation projects in Utah are locally determined and prioritized based on community priorities. Part of the states technical assistance efforts have been directed to assisting communities in identifying cost effective mitigation measures which yield benefits toward reducing their risk to hazards. A complete list of locally generated mitigation strategies can be found in the local mitigation strategies section of this plan. Interdisciplinary multi-jurisdictional working groups, coordinated at the county level, generated these mitigation strategies, which were incorporation into the regional Pre-Disaster Mitigation plans completed by the seven Associations of Government.

#1 Priority Goal: To conserve existing water resources in all sectors.

- A. Objective: *To educate the public about water conservation at home and in the workplace.*

Possible projects:

1. Provide related printed and broadcast material.
2. Provide teacher education on this subject for classroom use.
3. Provide speakers for civic groups and schools.

Responsible agencies:

State government for technical assistance and program development.

Local government for program development and delivery.

Possible funding:

Local government operating budget.

- B. Objective: To adopt strict water conservation practices in all state buildings.

Possible projects:

1. Retrofit buildings with water saving devices.
2. Educate employees about water conservation in the workplace.
3. Develop and install water conserving landscaping.

Responsible agencies:

State government for program development and delivery.

Possible funding:

State government operating budget.

- C. Objective: *To conserve water within the agricultural sector.*
Possible projects:
1. Develop and demonstrate water conservation practices for agricultural use.
2. Promote the use of treated wastewater effluent where appropriate.
Responsible agencies:
State government for technical assistance.
Local government for program development and delivery.
Possible funding:
Local government operating budget.

#2 Priority Goal: To reduce the impact of development on water resources.

- A. Objective: *To enhance building codes for new construction in areas where potable water supply is a problem.*
Possible projects:
1. Modify existing building codes or adopt new ones where appropriate.
2. Require water-conserving landscaping.
3. Require the use of water-conserving appliances and fixtures in new construction.
Responsible agencies:
State government for technical assistance.
Local government for program development and delivery.
Possible funding:
Local government operating budget.
- B. Objective: *To develop demonstration projects to show the public how they can retrofit their property with appropriate water conservation technology.*
Possible projects:
1. Develop demonstration projects to show how to utilize water conservation technology including, but not limited to, graywater use and rainwater capture.
Responsible agencies:
State government for technical assistance.
Public water systems for program development and delivery.
Possible funding:
Public water system operating budget.
- C. Objective: *To require that all public water systems have drought contingency plans.*
Possible projects:
1. Provide technical assistance for drought contingency planning.
Responsible agencies:

State government for technical assistance.
Local government for program development and delivery.
Possible funding:
Local government operating budget.

#3 Priority Goal: To improve public water infrastructure.

- A. Objective: *To reduce water loss within public water infrastructure.*
Possible projects:
1. Identify and correct leakage from water mains.
Responsible agencies:
State government for technical assistance.
Local government for program development and delivery.
Possible funding:
Local government operating budget.
- B. Objective: *To reduce water use by consumers.*
Possible projects:
1. Meter all water usage within water systems.
2. Set water rates that encourage water conservation and cover the cost of operations and maintenance.
Responsible agencies:
State government for technical assistance.
Local government for program development and delivery.
Possible funding:
Local government operating budget.
- C. Objective: *To increase efficiency through shared system management.*
Possible projects:
1. Develop incentives for public water systems to conserve their resources through merger or sharing.
Responsible agencies:
State government for technical assistance.
Public water systems for mutual cooperation.
Possible funding:
Public water system operating budget.
- D. Objective: *To expand and improve existing potable water systems.*
Possible projects:
1. Enhance the productivity and efficiency of existing raw water extraction methods.
2. Develop new well fields or surface water sources for public drinking water.
Responsible agencies:
State government for technical assistance.
Public water systems for program development and delivery.

Possible funding:

Public water system operating budget.

E Objective: *Support the State's Drought Mitigation Plans and initiatives.*

Possible projects:

1. Support the State Department of Natural Resources Water Resources Section in developing and updating the state drought plan.

Responsible agencies:

State Water Resources
Public water systems users
National Weather Service.

Possible funding:

Operating budgets of involved Agencies.

Earthquake Mitigation Strategies ✓

In addition to the mitigation strategies detailed below, the State Natural Hazard Mitigation Plan also incorporates any seismic mitigation endorsed by the Utah Seismic Safety Commission, and fully incorporates “A Strategic Plan for Earthquake Safety In Utah” completed in January 1995 by the Utah Seismic Safety Commission. A Strategic Plan of Earthquake Safety in Utah is located in Appendix C along with Earthquake Safety in Utah, A Progress Report on the Activities and Accomplishments of the Utah Seismic Safety Commission, December 2000.

The majority of mitigation projects in Utah are locally determined and prioritized based on community priorities. Part of the state’s technical assistance efforts have been directed to assisting communities in identifying cost effective mitigation measures that will yield benefits toward reducing their risk to hazards. A complete list of locally generated mitigation strategies for earthquakes is found in the local mitigation strategies section of this mitigation plan. Interdisciplinary multi-jurisdictional working groups, coordinated at the county level, generated these mitigation strategies, which were incorporated into the regional Pre-Disaster Mitigation plans completed by the seven Associations of Governments.

#1 Priority Goal: To reduce the effects of earthquakes on critical facilities.

- A. Objective: *To prepare digital maps that locate critical facilities in earthquake zones.*
Possible Projects:
1. Support seismic mitigation of state-owned critical facilities.
 2. Develop maps showing critical facilities overlaid on the earthquake hazard.
- Responsible agencies:
State government for state-owned facilities.
Local government for other facilities.
- Possible funding:
State and local government operating budgets.
- B. Objective: *To retrofit critical facilities to withstand earthquakes.*
Possible projects:
1. Reinforce the most hazard-prone parts of critical facilities.
 2. State Capitol retro-fit
- Responsible agencies:
Owners of those facilities.
- Possible funding:
HMGP, PDM for public facilities.

#2 Priority Goal: To reduce the effects of earthquakes on businesses, residential structures, and public buildings.

- A. Objective: *To retrofit businesses, residential structures, and public buildings to withstand moderate earthquakes.*
Possible projects:

1. University of Utah J.W. Willard Marriott Library
2. State Capitol building
3. Reinforce the most hazard-prone parts of businesses, residences, and public buildings.

Responsible agencies:

Owners of those buildings.

Possible funding:

HMGP, PDM for public buildings

#3 Priority Goal: To include seismic standards in building codes where appropriate.

- A. Objective: *Better enforcement of the seismic standards in the International Building Code IBC, which have been adopted statewide.*

Possible projects:

1. Training of building inspectors to the seismic provision in IBC

Responsible agencies:

State government for technical assistance.

Local government for code enhancement and enforcement.

Possible funding:

Local government operating budget.

#4 Priority Goal: To educate the public about earthquake safety, earthquake mitigation actions at home and in the workplace, etc.

- A. Objective: *To develop and disseminate earthquake safety programs for the public.*

Possible projects:

1. Provide printed and broadcast material.
2. Community Emergency Response Teams CERT
2. Provide teacher education and presentations for schools and civic groups.

Responsible agencies:

State government for technical assistance.

Local government for program development and delivery.

Possible funding:

HMGP, PDM

Local government operating budget.

Flood Mitigation Strategies ✓

The majority of mitigation projects in Utah are locally determined and prioritized based on community priorities. Part of the states technical assistance efforts have been directed to assisting communities in identifying cost effective mitigation measures that will yield benefits toward reducing their risk to hazards. A complete list of locally generated mitigation strategies completed, as part of the seven AOG plans is located in the mitigation strategy section of this mitigation plan. Interdisciplinary multi-jurisdictional working groups, coordinated at the county level, generated these mitigation strategies, which were incorporation into the regional Pre-Disaster Mitigation plans completed by the seven Associations of Government.

#1 Priority Goal: To obtain benefits of NFIP for all property owners.

- A. Objective: *To update and digitize all Flood Insurance Rate Maps (FIRMs).*
Possible projects:
1. Initiate planning process for the Map Modernization Program.
 2. Commence map modernization on a prioritized basis.
- Responsible agencies:
State government, Division of Emergency Services
- Possible funding:
FEMA grant under Floodplain Map Modernization
- B. Objective: *To have all jurisdictions participate in NFIP.*
Possible projects:
1. Enact legislation requiring all eligible jurisdictions to participate in NFIP.
 2. Promote the benefits of NFIP participation to all jurisdictions.
- Responsible agencies:
State government for NFIP guidance
Local government for NFIP ordinance and enforcement
- Possible funding:
Local government operating budget
- C. Objective: *To lower policy holders' insurance rates through participation in the Community Rating System (CRS).*
Possible projects:
1. Eligible communities participate in CRS.
- Responsible agencies:
State government for guidance and periodic CRS evaluation.
Local government for CRS program compliance.
- Possible funding:
Local government operating budget
- D. Objective: *To identify for the purposes of vulnerability insurable and non-insurable structures in the flood hazard area.*
Possible projects:

1. Locate all such structures through use of GIS digital floodplain maps.

Responsible agencies:

Local government

Possible funding:

Local government operating budget

- E. Objective: *To regulate the alteration of existing drainage patterns by new development.*

Possible projects:

1. Adopt codes and ordinances that set reasonable limits on the alteration of drainage patterns due to new development.
2. Provide technical assistance for the development or modification of codes and ordinances related to this mitigation objective.

Responsible agencies:

State government to provide technical assistance.

Local government to enact and enforce codes and ordinances.

Possible funding:

Local government operating budget

#2 Priority Goal: To mitigate flood loss by structural projects.

- A. Objective: *To survey all roads, bridges, and drainage structures determine their ability to withstand and pass the highest anticipated flood.*

Possible projects:

1. Identify and map all inadequate structures.
2. Propose solutions to any problems disclosed in the survey.

Responsible agencies:

State government for state-owned property.

State government for technical assistance to local governments.

Local government for property within their jurisdiction.

Possible funding:

State agency operating budgets.

Local government operating budgets.

- B. Objective: *To provide maintenance, repairs, and improvements to roads, bridges, and drainage structures.*

Possible projects:

1. Remove debris and vegetation from floodways and drainage structures through a systematic maintenance program.
2. Improve flood resistance through enhancement of wing walls, flood barriers, foundations, etc., at likely flood impact points.
3. Construct debris basins, flood retention ponds, energy dissipaters, etc., to control the flow and release of flood waters.

Responsible agencies:

State government for state-owned property.

Local government for property within their jurisdiction.

Possible funding:

State and local operating budgets for maintenance and repair.
HMGP, PDM for structural projects.

#3 Priority Goal: To assure that all people have basic information relating to flood issues.

- A. Objective: *To provide flood-related information through print and broadcast media.*

Possible projects:

1. Prepare and disseminate brochures, public service spots, etc., related to flood mitigation and flood safety issues.

Responsible agencies:

State government for technical assistance.
Local government for program development and execution.

Possible funding:

HMGP, PDM, FMA

- B. Objective: *To provide information and programs to schools.*

Possible projects:

1. To prepare and deliver flood related programs and materials for schools.

Responsible agencies:

State government for technical assistance.
Local government for program development and execution.

Possible funding:

HMGP, PDM, FMA

#4 Priority Goal: To mitigate flooding as a result of wildfires.

- A. Objective: *To re-vegetate and rehabilitate areas burned by wildfire.*

Possible projects:

1. Identify areas where re-vegetation and rehabilitation is necessary, and prioritize.
2. Commence re-vegetation and rehabilitation on a priority basis.

Responsible agencies:

Federal and state government for areas within their jurisdiction.
Federal and state government for technical assistance.
Local government for areas within their jurisdiction.

Possible funding:

Federal programs via USFS, BLM, NRCS, or others.
HMGP and PDM unlikely due to immediate need.

- B. Objective: *To construct temporary debris traps and other flood mitigating structures in wildfire-burned areas.*

Possible projects:

1. Identify areas where such construction is necessary, and prioritize.

2. Commence construction on a priority basis.

Responsible agencies:

Federal and state government for areas within their jurisdiction.

Federal and state government for technical assistance.

Local government for areas within their jurisdiction.

Possible funding:

Federal programs via USFS, BLM, NRCS, or others.

HMGP and PDM unlikely due to immediate need.

#5 Priority Goal: To provide support for all feasible flood related mitigation developed or proposed by a local jurisdiction.

- A. Objective: *To support locally generated flood mitigation.*

Possible projects:

3. To numerous to list see local mitigation section of this plan for details on mitigation proposed by the local jurisdictions.

Responsible agencies:

Federal and state government for areas within their jurisdiction.

Federal and state government for technical assistance.

Local government for areas within their jurisdiction.

Possible funding:

Federal programs via USFS, BLM, NRCS, or others.

HMGP and PDM.

Landslide Mitigation Strategies ✓

State plans shall include] an identification, evaluation, and prioritization of cost-effective, environmentally sound, and technically feasible mitigation actions and activities the State is considering and an explanation of how each activity contributes to the overall mitigation strategy. This section should be linked to local plans, where specific local actions and projects are identified

The majority of mitigation projects in Utah are locally determined and prioritized based on community priorities. Part of the states technical assistance efforts have been directed to assisting communities in identifying cost effective mitigation measures that will yield benefits toward reducing their risk to hazards. A complete list of locally generated mitigation strategies developed as part of the county mitigation working groups were used in the multi-jurisdictional plans and can be found in the local mitigation strategies in this plan. Interdisciplinary multi-jurisdictional working groups, coordinated at the county level, generated these mitigation strategies, which were incorporated into the regional Pre-Disaster Mitigation plans completed by the seven Associations of Government.

#1 Priority Goal: To reduce the impacts of landslides on critical facilities

- A. Objective: *Prepare digital maps that locate critical facilities in relation to potential landslide threats.*
Possible Projects:
3. Support seismic mitigation of state own critical facilities.
4. Develop maps showing critical facilities located in the landslide hazard area.
Responsible agencies:
State government for state-owned facilities.
Local government for other facilities.
Possible funding:
State and local government operating budgets.

#2 Priority Goal: Increase the level of knowledge related to landslides

- B. Objective: *Educate general public on landslide risk.*
Possible projects:
5. Utah Geologic Survey website
6. Division of Emergency Services website
7. Training manuals
8. Educational publications
Responsible agencies:
Utah Geologic Survey
Division of Emergency Services
Possible funding:
HMGP, PDM for public facilities.
- C. Objective: *Provide educational and training opportunities for city and county planners*

Possible projects:

9. Conduct half day landslide awareness training
10. Develop county landslide susceptibility maps for use in city and county planning

Responsible agencies:

United States Geologic Survey
Utah Geologic Survey
Division of Emergency Services

Possible funding:

HMGP, PDM for public facilities.

D. Objective: *Educate developers*

Possible projects:

11. Provide training to developers on landslide, there risks, and potential mitigation and legal liability.

Responsible agencies:

Utah Geologic Survey
Division of Emergency Services

Possible funding:

HMGP, PDM for public facilities.

#3 Priority Goal: Monitor landslide movement

E. Objective: *Continue to monitor landslide movement and respond to landslide activity.*

Possible projects:

12. Continued monitoring of landslide movement by the Utah Geologic Survey.
13. Continued field response to debris flows, landslides, and rock falls by the Utah Geologic Survey

Responsible agencies:

Utah Geologic Survey

Possible funding:

Utah Geologic Survey operating budget.

#4 Priority Goal: Encourage Cities, Towns, and Counties to develop ordinances for geologic hazards.

F. Objective: *Enable counties to develop ordinances*

Possible projects:

14. Develop updated landslide susceptibility maps starting with those areas most prone to landslides.
15. Continue to fund geotechnical report reviews. Currently upon request the Utah Geologic Survey will review geologic reports submitted by cities and counties.

16. Develop model ordinances and assist city and counties in development of geologic hazard ordinances.

Responsible agencies:

Utah Geologic Survey
Department of Natural Resources
Division of Emergency Services

Possible funding:

Utah Geologic Survey operating budget, HMGP, PDM, city and county.

Severe Weather Mitigation Strategies ✓

#1 Priority Goal: To assure that all people have basic information relating to severe weather issues.

- A. Objective: *To provide weather-related information through print and broadcast media.*
Possible projects:
1. Prepare and disseminate brochures, public service spots, etc., related to severe weather, including, but not limited to, thunderstorms, tornados, lightning, hail, heavy snow fall, ice storms, extreme cold, and extreme heat.
Responsible agencies:
National Weather Service for publications.
American Red Cross for publications.
State government for technical assistance.
Local government for program development and execution.
Possible funding:
HMGP, PDM
- B. Objective: *To provide severe weather information and programs to schools.*
Possible projects:
2. Prepare and deliver severe weather-related programs and materials for schools.
Responsible agencies:
National Weather Service for publications.
American Red Cross for publications.
State government for technical assistance.
Local government for program development and execution.
Possible funding:
HMGP, PDM

#2 Priority Goal: To provide or enhance severe weather warning systems.

- A. Objective: *To be able to warn people in tornado-prone areas through appropriate technology.*
Possible projects:
1. Increase participation the National Weather Service StormReady program.
2. Increase weather radio availability
Responsible agencies:
National Weather Service
State government for technical assistance and grant funding.
Local government for program development and execution.
Possible funding:
HMGP, PDM

- B. Objective: *To be able to warn people of hazardous weather via broadcast media.*
Possible projects:
1. Enhance the Emergency Alert System (TV and radio) statewide.
2. Enhance NOAA Weather Radio coverage statewide.
Responsible agencies:
State government.
Possible funding:
HMGP, PDM

#3 Priority Goal: Enhance avalanche knowledge and warning ability

- A. Objective: *To be able to warn people in potentially avalanche prone areas through appropriate technology.*
Possible projects:
1. Continued support and funding of the Utah Avalanche Forecast Center UAFC. The UAFC has numerous warning systems in place with an avalanche warning posted on the web and through their hotline each morning.
Responsible agencies:
National Weather Service
U.S. Forest Service
State government for technical assistance and grant funding.
Local government for program development and execution.
Possible funding:
HMGP, PDM
- B. Objective: *Increase the avalanche skill base among the various users groups*
Possible projects:
2. Continued support and funding of the Utah Avalanche Forecast Center
3. Low or no cost avalanche education similar to the avalanche education offered by the Utah Avalanche Forecast Center or avalanche expert.
4. Tie in with ski resorts to assist in offering avalanche training.
5. Conduct training specific to snowmobilers.
6. Increase avalanche knowledge of city and county emergency managers.
Responsible agencies:
National Weather Service
U.S. Forest Service
State government for technical assistance and grant funding.
Local government for program development and execution.
Possible funding:
HMGP, PDM

#3 Priority Goal: To design public buildings and private property to withstand the effects of severe weather.

- A. Objective: *To require that all new construction of any type meet enhanced standards for wind-loading, snow-loading, and other weather-related hazards.*
Possible projects:
1. Develop codes and ordinances that require safe rooms in new construction.
Responsible agencies:
State government for technical assistance.
Local government for code development and enforcement.
Possible funding:
Local government operating budget.
- C. Objective: *To retrofit existing structures to meet extreme weather standards.*
Possible projects:
1. Ensure retrofits comply with new building codes.
Responsible agencies:
State government for technical assistance.
Local government for program development and execution.
Possible funding:
HMGP, PDM, local government operating budget.
- D. Objective: *To identify and equip public buildings to serve as shelters for travelers stranded because of severe winter storms.*
Possible projects:
1. Identify suitable public buildings and equip them with supplies and emergency power generation capability.
Responsible agencies:
American Red Cross for guidance on shelter requirements.
State government for technical assistance.
Local government for program development and execution.
Possible funding:
HMGP, PDM, local government operating budget.

Wildfire Mitigation Strategies ✓

The majority of mitigation projects in Utah are locally determined and prioritized based on community priorities. Part of the states technical assistance efforts have been directed to assisting communities in identifying cost effective mitigation measures that will yield benefits toward reducing their risk to hazards. A complete list of locally generated mitigation strategies relating to wildfire is available in the local mitigation strategies section of this mitigation. Interdisciplinary multi-jurisdictional working groups, coordinated at the county level, generated these mitigation strategies, which were incorporation into the regional Pre-Disaster Mitigation plans completed by the seven Associations of Government.

#1 Priority Goal: To eliminate dangerous fuel loading in wildlands.

- A. Objective: *To reduce fuel loads in and around critical facilities, regardless of ownership.*

Possible projects:

1. Reduce fuels in the vicinity of power stations, power lines, and transformer sites.
2. Reduce fuels along major transportation routes, prioritized by vulnerability and usage.
3. Reduce fuels in critical watersheds.
4. Reduce fuels around other critical facilities.

Responsible agencies:

State government for state-owned facilities and acreage.
Federal government for federal facilities and acreage.
Local government for their own jurisdictions.
DPS-OEM for Mitigation grants.
EMNRD-Forestry Division for various grants.
Private individuals and companies for their own property

Possible funding:

HMGP, PDM, SFA-WUI, FLEP

- B. Objective: *To reduce fuels on private property.*

Possible projects:

1. Provide assistance with disposition of vegetative material removed from private land, as through chipping or burning.
2. Develop programs for re-use of vegetative material that would contribute to the local economy.

Responsible agencies:

State and local government for providing assistance.
DPS-OEM for Mitigation grants.
EMNRD-Forestry Division for various grants.
USFS for various grants.
Private individuals and businesses for their own property

Possible funding:

HMGP, PDM, SFA-WUI, FLEP, RCA-EAP, CFRP

- C. Objective: *To reduce fuels on public lands.*
Possible projects:
1. Provide assistance with disposition of vegetative material removed from public land, as through chipping or burning.
 2. Develop programs for re-use of vegetative material that would contribute to the local economy.
- Responsible agencies:
Federal, state and local government for their jurisdictions.
DPS-OEM for Mitigation grants.
EMNRD-Forestry Division for various grants.
USFS for various grants.
- Possible funding:
HMGP, PDM, SFA-WUI, FLEP, RCA-EAP, CFRP

#2 Priority Goal: To provide public information and education regarding the wildfire hazard and what people can do about it.

- A. Objective: *To provide public information through print and broadcast media on the subject of defensible space.*
Possible projects:
1. Develop and disseminate printed information on the subject of defensible space, to include (but not limited to): (a) reducing fuels; (b) building with fire-resistant materials; (c) designing roads and driveways; (d) protecting utilities; and (e) using fire-resistant landscaping.
 2. Develop and disseminate radio and TV spots for the same.
- Responsible agencies:
State government for technical assistance and dissemination of information to local governments. Local government for dissemination of information to people in their jurisdictions. DPS-OEM for grant funding.
- Possible funding:
HMGP, PDM
- B. Objective: *To provide educational community meetings and seminars on the subject of defensible space.*
Possible projects:
1. Develop and deliver community meetings and seminars on the subject of defensible space.
 2. Develop demonstration project to illustrate defensible space tactics.
- Responsible agencies:
State government for technical assistance and assistance with delivery of meetings.
Local government for delivery of meetings and development of demonstration project.
DPS-OEM for grant funding.
- Possible funding:

HMGP, PDM
Local government operating budgets

- C. Objective: *To provide information and technical assistance to local government planners and private developers on the subject of fire-resistant communities.*

Possible projects:

1. Develop and deliver printed materials to guide planners and developers in utilizing defensible space tactics when laying out subdivisions and other development projects.

Responsible agencies:

State government for technical assistance and dissemination of information to interested parties.

Local government for dissemination of information to interested parties in their jurisdictions.

DPS-OEM for grant funding.

Possible funding:

HMGP, PDM

Local government operating budgets

- D. Objective: *To provide public information on the subject of what to do if a wildfire is nearby.*

Possible projects:

1. Develop and deliver public information on personal and family preparedness for evacuation and/or defense if a wildfire appears to be threatening.

Responsible agencies:

State government for technical assistance and dissemination of information to local governments.

Local government for dissemination of information to people in their jurisdictions.

DPS-OEM for grant funding.

Possible funding:

HMGP, PDM

Local government operating budgets

#3 Priority Goal: To encourage and assist local governments to require property owners and developers to utilize defensible space tactics.

- A. Objective: *To develop local code enhancements that require utilization of defensible space tactics where appropriate.*

Possible projects:

1. Develop and enact appropriate code enhancements.

Responsible agencies:

State government for technical assistance.

Local government for code development and enforcement.

Possible funding:

Local government operating budget.

#4 Priority Goal: To complete the rural addressing program and digital maps that locate critical facilities, subdivisions, fire fighting resources, roads and bridges, and specific private addresses.

- A. Objective: *To identify every residence or business with a street name and address.*
Possible projects:
1. Complete the rural addressing program and stay current with it.
Responsible agencies:
Local government.
Possible funding:
Local government operating budget.
- B. Objective: *To develop digital maps of the wildland-urban interface.*
Possible projects:
1. Digitally map all street addresses, critical facilities, fire fighting resources, etc., in the wildland-urban interface.
2. Extend digital mapping to include all areas subject to the wildfire hazard.
Responsible agencies:
State government for technical assistance.
Local government for doing the work.
Possible funding:
Local government operating budget.

#5 Priority Goal: To provide training, equipment, and resources for fire departments to fight wildfires.

- A. Objective: *To enhance existing wildfire training programs and equipment procurement for fire departments.*
Possible projects:
1. Enhance existing programs.
Responsible agencies:
State government for technical assistance.
Local government for requesting assistance.
Possible funding:
HMGP, PDM, SFA-WUI, RFA, VFA
Local government operating budgets
- B. Objective: *To enhance existing or develop new fire fighting resources for wildfire suppression.*
Possible projects:
1. Enhance existing or develop new water sources in wildfire-prone areas.
2. Maintain water filling areas for helicopters.
Responsible agencies:
Local governments

Possible funding:

HMGP, PDM, SFA-WUI, local government operating budgets

- C. Objective: *To preposition extra fire fighting resources prior to the beginning of the fire season.*

Possible projects:

1. Contract with air and ground fire fighting contractors to position their assets at key points within the state.

Responsible agencies:

State government

Possible funding:

State operating budget

All Hazard Mitigation Strategies ✓

All hazard mitigation strategies are those strategies, which do not directly correspond with one hazards or in there completion mitigate a number of hazards. The emphasis in the all hazard mitigation arena in the coming years will be to include man made hazards and terrorism in the state mitigation plan, refine the current plan in an attempt to have it meet the federal requirements as an enhanced mitigation plan, and finally to increase the accuracy of the vulnerability assessment. Completing these strategies will allow the mitigation plan to be a more useful plan to the end users.

#1 Priority Goal: Improve the State's Disaster Response and Recovery Capability.

- A. Objective: *Facilitate the enhancement of State and local Emergency Recovery Plans and provide related training and technical assistance.*

Possible projects:

1. Facilitate the review of existing Disaster Recovery Plans for potential enhancement with respect to All Natural and Man-made Hazard Mitigation initiatives
2. Provide planning and related technical resources to facilitate the enhancement of Disaster Recovery Plans to include Hazard Mitigation initiatives

Responsible agencies:

State government, Division of Emergency Services

Possible funding:

EMPG, HMGP, FMA, DRI, State

#2 Priority Goal: Continued and forceful involvement with mitigation planning in Utah.

- A. Objective: *Push for an Enhanced PDM plan.*

Possible projects:

1. Have a state mitigation plan approved by November 1, 2004
2. Submit a PDM-C grant application to
 - i. Increase the accuracy of GIS data utilized in the current plan
 - ii. Digitize the state owned facilities data base
3. Review DES records to support financial management of federal funding. DES has successfully managed the federal funding for the Olympics, Homeland Security, CESSP, EMPG, and DR-1285.

Responsible agencies:

State government, Division of Emergency Services

Possible funding:

EMPG, HMGP, FMA, PDM, State

- B. Objective: *To provide technical assistance, especially during the planning review process, to regional planning agencies and communities in a timely manner, with a turnaround time no greater than 2 weeks, as the multi-jurisdictional and local plans are completed.*

Possible projects:

1. Continued involvement with the SHMT
2. Continued coordination with the SHMO, Earthquake Program Manager, and State Flood Plain Manager
3. Coordination with FEMA
4. Standing Natural Hazard PDM plan review committee.

Responsible agencies:

State government, Division of Emergency Services

Possible funding:

EMPG, HMGP, FMA, PDM, State